

REMARKS/ARGUMENTS

In response to the Office Action dated August 12, 2004, claims 2, 3, 4, 7, 8 and 10 are amended. Claims 1-15 are now active in this application. No new matter has been added. Claims 2, 3, 4, 7, 8 and 10 are amended to insert “further” before “comprising” for better form, and claim 8 is further amended to depend from claim 1.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 8 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In support of this position, the Examiner identifies several phrases that lack clear antecedent basis. By this response, each of the noted points of indefiniteness has been appropriately addressed by amending claim 8 to depend from claim 1. Therefore, it is respectfully urged that the rejection be withdrawn.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 103

I. Claims 1-4, 7, 8 and 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant’s Admitted prior art disclosed in the Description of the Prior Art section, pages 1-3 (AAPA) in view of Suzuki et al. (USPN 6,064,775).

Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Suzuki et al., in further view of Krumm (USPN 6,611,622).

Claims 9, 10 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Suzuki et al., in further view of Matsugu et al. (USPN 6,621,921).

II. The rejections are respectfully traversed.

Each of independent claims 1, 9 and 11 is at least based upon a combination of AAPA and Suzuki et al.

Independent claim 1 recites:

A three-dimensional data generating apparatus, comprising:
an obtaining portion for obtaining plural image data representing images obtained by photographing an object from different viewpoints, the plural image data each representing respective one of the images;
a first detector for detecting corresponding points of the images by a gradient method;
a second detector for detecting corresponding points of the images by a correlation method;
a selector for selecting either one of the first detector or the second detector; and
a generator for generating three-dimensional image of the object based on the corresponding points detected by the selected detector.

Thus, claim 1 is directed to an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints. This apparatus includes two distinct detectors for detecting corresponding points of the images (a first detector that detects corresponding points of the images via a gradient method and a second detector that detects corresponding points of the images via a correlation method) and a selector selects the first or the second detector to provide the corresponding points of the images that are used by a generator to generate the three-dimensional image of the object.

The AAPA merely indicates that detectors that detect corresponding points of the images via a gradient method and corresponding points of the images via a correlation method are known, but does not disclose that such different detectors are used together in an apparatus that generates three-dimensional data from plural images of an object and/or a selector is provided to select one or the other of these detectors for detecting the corresponding points of the images. This is the subject matter of the present application, not the AAPA.

Suzuki et al. is directed to an image processing apparatus which performs image processing to control image quality, and particularly to an image processing apparatus which determines a process to control image quality according to the purpose of the process used such as the enhancement of the qualitative effect on feeling (Q-effect) and 3-dimensional effect on feeling (3D-effect) and the feature of each subject picture, and implements the selected process that best meets the picture. While the phrase 3D-effect is used, Suzuki et al. is **NOT** directed to an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints. This is quite important as Suzuki et al. is dealing with enhancing the quality of individual pictures and with choosing the proper process that best meets the individual picture, not to generating three-dimensional data.

In this regard, what is disclosed in Suzuki et al. has nothing to do with the subject matter recited in independent claim 1; an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints. Suzuki et al. has no disclosure or suggestion that what is disclosed could, or should be used in an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints. The fact that Suzuki et al. may analyze features of an input two-dimensional image to determine the class of image it belongs to and then uses this determination to select the image processing method that is best suited for improving the quality of the two-dimensional image provides no realistic motivation for a person of ordinary skill in the art to zero in on such analysis and determination of Suzuki et al. and then somehow convert it for use in an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints and which includes a first detector for detecting corresponding points of the images via a gradient

method and a second detector for detecting corresponding points of the images via a correlation method, which combination the Examiner has yet to evince is in the prior art, and provide a selector for selecting either the first or the second detector to provide the corresponding points of the images that are used by a generator to generate the three-dimensional image of the object.

Furthermore, a teaching of analyzing features of an input two-dimensional image to determine the class of image it belongs to and then using this determination to (1) *select the image processing method that is best suited for improving the quality of the two-dimensional image* (Suzuki et al.) is substantially different from providing a selector (2) *to select either a first or a second detector to provide the corresponding points of the images that are used by a generator to generate the three-dimensional image of the object*. More specifically, just a teaching as to (1) would not realistically motivate a person of ordinary skill in the art to provide (2) in an apparatus that generates three-dimensional data from plural images of an object that are obtained by photographing the object from different viewpoints.

It should be recognized that the fact that the prior art could be modified so as to result in the combination defined by the claims at bar would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986).

The motive that the Examiner states for somehow combining the teaching of Suzuki et al. with the AAPA so as to result in the invention recited in claim 1 is as follows:

The motive to do so would have been to exploit the relative advantages of each of the methods. More particularly, a method, constructed in this manner, would advantageously accommodate images of low contrast and luminance and images of high variable contrast and color gradations. Combining the two methods, in this manner, and incorporating them into the method of 3D data generation would produce a method that sufficiently conforms to the three-

dimensional data generating method put forth in claim 11 (same reasons apply for claim 1; see to of page 7 of the Official Action).

It is clear from the Examiner's statements that it is not the prior art that suggests the desirability of the modification proposed by the Examiner, but the Examiner himself based upon hindsight recognition after reading the present specification.

Recognizing, after the fact, that a modification would provide an improvement or advantage, *without suggestion thereof by the prior art*, rather than dictating a conclusion of obviousness, is an indication of improper application of hindsight considerations. Simplicity and hindsight are not proper criteria for resolving obviousness. *In re Warner*, 379 F.2d 1011, 154, USPQ 173 (CCPA 1967).

Applicant submits that the only apparent motivation of record for the proposed combination of the AAPA and the methodology of Suzuki et al. to somehow result in the inventions recited in independent claims 1 and 11 is found in Applicant's disclosure which, of course, may not properly be relied upon to support the ultimate legal conclusion of obviousness under 35 U.S.C. §103. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 227 1 USPQ2d 1593 (Fed. Cir. 1987). It is, therefore, respectfully submitted that the Examiner has not established the requisite motivation for the proposed combination of references to arrive at the claimed invention. Consequently, withdrawal of the rejections of claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over at least AAPA in view of Suzuki et al. is respectfully solicited.

CONCLUSION

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues

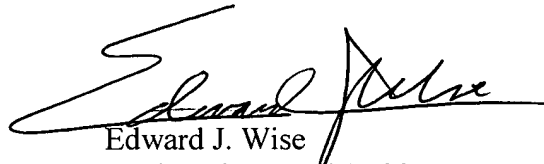
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that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY



Edward J. Wise
Registration No. 34,523

600 13th Street, NW
Washington, DC 20005-3096
(202) 756-8000 EJW/dmd
DATE: November 10, 2004
Facsimile: (202) 756-8087